

# IOWA energy BULLETIN

Department of Natural Resources  
Vol. 28, Num. 1, Winter 2002



## Easing Budget Blues with Green Solutions

Iowa state government is dealing with a difficult budget crunch caused by the lowest growth in state revenues in 50 years. As state

agencies search for ways to reduce costs, many facilities are appreciative of an innovative energy program that has provided a solution.

### SIFIC Savings

The state of Iowa Facilities Improvement Corporation (SIFIC) is a DNR-managed program that works directly with state agencies to install energy efficiency improvements. The program began in 1986 as a way to decrease energy costs, improve the quality and comfort of state facilities for Iowa citizens, and help the environment.

SIFIC has helped state facilities save millions of dollars in energy costs. Now as those facilities pare down their budgets, utility bill savings are a major asset.

Iowa state government owns hundreds of buildings with more than 43 million square feet of building space – that is the same as 10 of Chicago's Sears Towers. Combined, the state currently pays about \$83 million\* in heating and electricity costs for state

facilities. Without the energy improvements made through SIFIC, those costs *would* be much higher.

In Fiscal Year 2001, state facilities' heating bills (which do not include electricity) would have been \$20 million more, or 33 percent higher, if they had

*continued on page 3*



Iowa government has cut spending of state general funds by 20 percent since spring of 2000.

### In This Issue.....

#### Message from Sharon

Tahtinen .....	2
Energy Official Retires .....	2
Energy Plan On Web .....	3
Analyst's Angle .....	4
New Ethanol Plants .....	5
Rural Life Poll .....	5
Top of Iowa Wind Farm .....	6
Energy Award Winners .....	6
Building Energy Codes .....	7
Events Calendar .....	8

*\*Energy costs are estimates based on analyses by the DNR from state facility budgets.*

# Message from Sharon Tahtinen

## Change Brings Opportunity

Many changes are occurring in Iowa state government. A renewed focus on improving customer service and efficiency, along with an economic recession, has made government look for ways to operate more effectively.

The Iowa Department of Natural Resources is no exception. Today, our agency is working to align program areas to better serve Iowans and improve our ability to protect the environment. Our previous seven divisions are now three – Environmental Services (energy, waste, air, water, geology), Living Resources (parks, wildlife, fish, forestry, law enforcement) and Management Services (internal administration,

and accounting services, etc.)

With change comes exceptional opportunity. The Energy Bureau is joining with the part of the agency that manages waste and recycling programs to become a new bureau in Environmental Services.

We are very excited about joining forces with waste management, as we explore many cooperative efforts to help businesses and facilities improve energy efficiency, reduce waste streams and become more productive. We also will work together on alternative energy opportunities using waste for fuel resources. Of course, we will continue administering the energy programs we have always led such as building energy management programs, energy emergency preparedness, renewable energy demonstration projects, and much more.

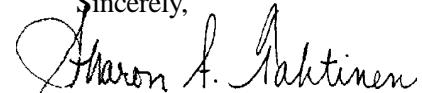
Additionally, our goal is to work more closely with areas such as air, land and water quality to teach Iowans how our natural resources are linked, and improve the management of those resources. We have always shown energy's intrinsic effect on all areas of

the environment; now we will enhance our ability to make a difference.

My message to you is that energy efficiency and renewable energy development will continue to be priorities for the DNR. We believe strong energy policy and programs are critical to improving Iowa's economy and environment. We are committed to furthering our work in this area, and look forward to working with Iowans toward a sustainable energy future.

Thank you for your continued support of effective energy efforts for Iowa. As always, together we can make a difference.

Sincerely,



Sharon A. Tahtinen  
Bureau Chief

2A

## Bean Retires as Head of Energy and Geology



Larry Bean

After more than 20 years of service to the state, Larry Bean, administrator of the Iowa DNR's Energy and Geological Division, retired Jan. 3, 2002.

"I have thoroughly appreciated and enjoyed working with Iowans to further energy policy, and to enhance geological resources in the state," said Bean. "I know the strong commitment to Iowa's environment will continue."

Bean focused on natural resource management practices that leverage economic and technological opportunities. He

helped direct the DNR's efforts in state energy policy, energy emergency preparedness, renewable energy development, geographic information systems, groundwater protection and energy efficiency.

A native Iowan, Bean joined the Iowa Energy Policy Council in 1981, which later merged into the DNR in 1986 to become the current Energy and Geological Resources Division.

Elizabeth Christiansen, administrator of the Waste Management and Land Quality Division, has been named interim administrator for Energy and Geological Resources.

continued from page 1

# Easing Budget Blues with Green Solutions



not made energy improvements through SIFIC, according to the program's DNR managers.

## Budget Benefits

The cornerstones of the SIFIC program are technical integrity and cash-flow neutrality. When facilities join the program, they receive complete technical expertise to determine the most cost-effective solutions for their buildings. Improvements can include new heating and cooling equipment, lighting improvements, control systems, renewable energy facilities, and many more options. All of SIFIC's analyses, recommendations, and specifications are thoroughly reviewed by DNR engineers to ensure technical quality.

Best of all, state facilities have no upfront costs, and create either a positive or neutral impact on their budgets. SIFIC provides interest-free loans to cover the initial costs of engineering analyses and design/bid specification work, which are then rolled into the lease-purchase financing for the project. The lease payments are structured so that the energy savings are equal to, or greater than, actual payments.

SIFIC and the DNR will continue to provide energy-saving alternatives for Iowa's taxpayers and state government facilities.

For more information, contact Dan Lane with the DNR at (515) 281-6696; e-mail: [Dan.Lane@dnr.state.ia.us](mailto:Dan.Lane@dnr.state.ia.us)

## Top 5 Energy Savers

State agencies with the the most energy bill savings through efficiency improvements:

1. State Capitol Complex: \$234,250 annually
2. Glenwood Resource Center: \$202,350 annually
3. Woodward Resource Center: \$184,993 annually
4. Fort Madison State Penitentiary: \$153,061 annually
5. Independence Mental Health Institute: \$150,570 annually

Please note: Each facility includes several buildings as part of its complex.

## Energy Rewarded in Iowa Grants

For the first time ever, three energy projects will receive money through a state grant program that provides funds to Iowa communities for infrastructure improvements.

The projects include the construction of wind turbines in Lenox and Wall Lake, and an energy-conscious design for a new childcare facility in Sanborn.

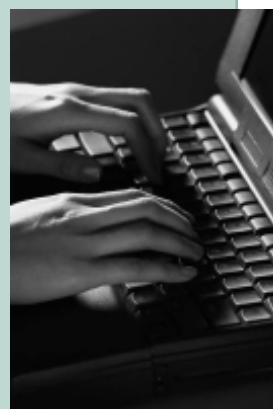
The funds are provided by the U.S. Dept. of Housing and Urban Development (HUD) and administered by the Iowa Dept. of Economic Development. Eighty Iowa communities received almost \$25 million for projects. For details, go to: [www.community.state.ia.us](http://www.community.state.ia.us)

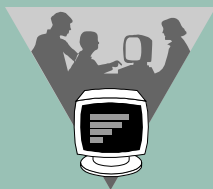
## 2002 Energy Plan Update On the Web

The DNR invites you to read the new *2002 Iowa Comprehensive Energy Plan Update*. This biennial report provides an overview of Iowa's energy trends, the results of energy programs in the state, and policy recommendations for effective energy management in the future.

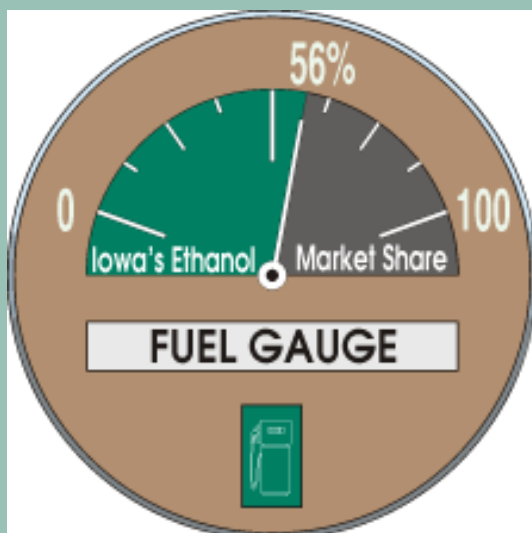
The 2002 plan is available electronically by going to: [www.state.ia.us/dnr/energy/pubs](http://www.state.ia.us/dnr/energy/pubs)

For a paper copy of the plan or information, please contact Julie Tack at (515) 281-8665; e-mail: [Julie.Tack@dnr.state.ia.us](mailto:Julie.Tack@dnr.state.ia.us)





## Record Ethanol Sales: Gauging Iowans' Reaction to Attractive Prices



Iowa motorists are purchasing ethanol-blended gasoline in record numbers. E10 (10 percent ethanol, 90 percent gasoline) accounted for 56.9 percent of the gasoline sold in the state in January 2002 – an all-time record.

### Why the Rise?

In 2001, sales of ethanol-blended gasoline rose 6.5 percent above 2000 levels. Motorists are choosing ethanol-blended gasoline more often because of competitive pricing at the pump. In the last year, ethanol-blended gasoline has had equal or lower prices than other gasoline fuels.

Corn prices have been stable during the last five years, creating an adequate supply for ethanol production. Additionally, ethanol prices are kept low because of the other agricultural products created from the corn – like cattle feed and steam heat – that can be used to offset ethanol production costs.

Also, because corn is an abundant Iowa product, local ethanol producers benefit from ready supplies and low shipping costs.

E10's popularity is expected to continue growing, partly because of a new incentive for retailers who have E10 as more than 60 percent of total sales, a law that came into effect Jan. 1, 2002.

### Economic Boost

Ethanol use is an important contributor to Iowa's economy and environment. For example, the use of E10 by Iowa motorists in 2001 helped to:

- Displace the use of 82.5 million gallons of unleaded gasoline
- Lower vehicle carbon emissions by 295,000 tons
- Create \$1.7 billion in economic activity in Iowa.

Because Iowa imports all the petroleum consumed in the state, using homegrown energy like ethanol makes economic sense. About 60

cents of every dollar spent on non-blended gasoline leaves the state economy. In 2001, Iowa total gasoline expenditures exceeded \$2.1 billion; E10 sales accounted for approximately \$1.1 billion of the total, bolstering Iowa's economy.

### Future Growth

Gasoline consumption is projected to increase more than 1 percent each year through 2020. With no new gasoline refineries being built, and at least 11 new ethanol plants being planned for Iowa, ethanol will play a larger role each year in meeting the state's supply needs.

For more information about gasoline prices, contact David Downing at (515) 281-4876; e-mail: [David.Downing@dnr.state.ia.us](mailto:David.Downing@dnr.state.ia.us). For information about ethanol, contact Jennifer Moehlmann at (515) 281-8518; e-mail: [Jennifer.Moehlmann@dnr.state.ia.us](mailto:Jennifer.Moehlmann@dnr.state.ia.us)



## New Ethanol Plants Will Boost Rural Economies



Eleven new ethanol plants in various stages of planning and construction will bring a major boost to Iowa's rural economic picture. The ethanol plants, which are being built in all regions of the state, will produce more than 330 million gallons of ethanol.

Of the 11 plants, five have officially broken ground and will be finished in 2002; two are already producing ethanol. These seven plants will use more than 70 million bushels of corn each year and create 173 new jobs. Construction costs for the plants total nearly \$240 million.

Additionally, nine of the ethanol plants are farmer cooperatives, allowing more than 2,400 farmers to benefit from production revenues.

The new ethanol plants are located in or near the towns of Burlington, Coon Rapids, Eagle Point, Earlville, Eldora, Fort Dodge, Galva, Lakota, Newell, Sioux Center and Woodbine.

For more information, contact Jennifer Moehlmann with the DNR at (515) 281-8518; e-mail: [Jennifer.Moehlmann@dnr.state.ia.us](mailto:Jennifer.Moehlmann@dnr.state.ia.us)

## Iowa Farm Poll Shows Support for Renewable Energy

A survey of Iowa farmers by Iowa State University Extension released in the fall of 2001 showed extensive support by producers for alternative energy development in the state. According to the poll, 87 percent of respondents believe Iowa should invest more in alternative energy sources.

Other survey findings related to alternative energy included:

- 94 percent believe more research should focus on new alternative energy uses for Iowa farm commodities

- 91 percent agree wind energy is a viable energy source to utilize

- 90 percent believe more research should focus on new alternative crops for Iowa

- 89 percent believe Iowa should develop policies or incentives for using biodiesel fuels such as those derived from soybean oil

- 72 percent believe Iowa tax incentives for alternative energy should encourage small start-up facilities

- 89 percent believe it is a worthy goal for Iowa to move toward

energy independence.

The "Iowa Farm and Rural Life Poll," implemented since 1982, addresses diverse issues affecting Iowa agriculture including economic development and community concerns. ISU Extension randomly



sampled 3,376 Iowa producers in February and March 2001 with a 61 percent response rate.

For more information about the survey conducted by ISU Extension, contact Paul Lasley, Extension Sociology, (515) 294-0937, [plasley@iastate.edu](mailto:plasley@iastate.edu) or Del Marks, Extension Communication Systems, (515) 294-9807, [delmarks@iastate.edu](mailto:delmarks@iastate.edu)

## DNR Conducts PV Survey

In 2001, the DNR conducted a survey of 1,206 architects, contractors, developers, engineers, college instructors and realtors in six Midwest states (Illinois, Iowa, Minnesota, Missouri, Nebraska and Wisconsin) to determine current barriers to increased use of photovoltaic technologies (PV). The survey showed that lack of a market structure, cost and

lack of knowledge by building professionals were reasons for low PV use in the region.

The DNR used the survey findings to develop a strategic plan for increasing use of PV in Midwest buildings.

To see survey results and the strategic plan, go to: [www.state.ia.us/dnr/energy/programs/solar](http://www.state.ia.us/dnr/energy/programs/solar)

## And Then There Were Three....



Top of Iowa Wind Farm, Worth County, is Iowa's third major wind energy production site, with 89 900-kW wind turbines across one of Iowa's northern-most counties. Along with wind farms in Buena Vista and Cerro Gordo counties, the Top of Iowa wind farm produces enough electricity to power 100,000 homes.

## Did You Know

In June 2001, the National Academy of Sciences confirmed greenhouse gases are causing global climate change.

Additionally, 85 percent of carbon dioxide emissions, a greenhouse gas, come from fossil fuel burning.

The effects of high greenhouse gases in the atmosphere include extremities in weather, public health concerns, changes in ecosystems and impacts to agriculture.

## Governor's Iowa Environmental Excellence Awards

# Newest Award Winners Include Three Energy Leaders

Twenty Iowa organizations, businesses and individuals received environmental excellence awards from Gov. Tom Vilsack at a ceremony Jan. 22 in Des Moines. Included were three organizations winning awards for work in energy efficiency and renewable energy development.

"These organizations serve as environmental leaders and models for each us to follow," Vilsack said. "Safeguarding Iowa's land, air and water is critical to our state, and I congratulate them for their outstanding work."

The awards program honors Iowans for their leadership and innovation in protecting Iowa's natural resources. Awards are given for comprehensive environmental programs by organizations, along with special project awards in water quality, air quality, waste management, habitat restoration/development and energy efficiency/renewable energy. The three energy awards winners included:

**The Iowa Association of Municipal Utilities**, for its new energy-efficient training and office complex near Ankeny. The building, which has a geothermal heat pump system, energy-efficient lighting and other energy-saving technologies, uses half the energy required by Iowa's model energy code for similar-sized buildings. The associa-

tion also installed a septic wetland for energy-efficient wastewater treatment. The building serves as a model to hundreds of visitors each year.

**National By-Products** of Des Moines, a rendering plant that replaced fossil fuels with animal fats for fuel in boilers. The plant cut air emissions by half compared to those generated from petroleum-based fuels. National By-Products conducted stack emission tests at its Des Moines and Clinton facilities and shared the information with state environmental regulatory agencies. This allows other companies to understand the benefits of this alternative, reliable, fuel.

**Wells Kastner Schipper**, an architectural firm from West Des Moines, for designing the Story County Human Services Building in Ames. Balancing customer needs, budget requirements, sustainable design, occupant comfort, and energy efficiency, the building will save county taxpayers at least \$20,000 per year in energy costs, and has a positive effect on worker efficiency thanks to its people-friendly design.

For more information about the Governor's Environmental Excellence Awards, go to: [www.state.ia.us/dnr](http://www.state.ia.us/dnr) or contact Julie Tack with the DNR at (515) 281-8665; e-mail: [Julie.Tack@dnr.state.ia.us](mailto:Julie.Tack@dnr.state.ia.us)



Iowa Energy Bank

## Community Forum to Save Energy

April 24, 2002  
Sioux City, IA

or June 12, 2002  
Cedar Rapids, IA

This **free**, one-day conference will show communities how to save money, improve buildings and create economic development opportunities. For community officials, business managers, economic development officers, school superintendents and key decision makers. Sponsored by the Iowa DNR, U.S. Dept. of Energy, MidAmerican Energy, Alliant Energy and Central Iowa Power Cooperative.

Contact Chad Stobbe at (515) 242-5851, or go to [www.state.ia.us/dnr/energy/events](http://www.state.ia.us/dnr/energy/events) for more details!

## Building Energy Codes Help Iowa Communities

A few Iowa communities are leading the way to more energy-efficient construction of new buildings.

Energy efficiency is proven to help save money, improve the long-term quality and comfort of buildings, and enhance the housing stock of a community. The DNR is working with several Iowa towns to help deliver those benefits through building energy code education and enforcement.

### What Are Building Energy Codes?

Building energy codes establish minimum standards of energy efficiency in materials and construction techniques. Iowa's current state building energy code is the 1992 Model Energy Code and ASHRAE 90.1-1989. However, many states and communities are moving to the 2000 version of these codes, which update and improve the levels of energy efficiency and quality of construction.

Iowa communities can choose to adopt the 2000 codes and enforce them locally. In recent years, the DNR has created several educational programs to teach local officials and builders the

benefits of building energy codes through workshops, a circuit rider who travels among communities, and demonstration projects.



### Community Leaders

To date, five Iowa communities – Sioux Center, Marion, Coralville, Centerville and Linn County – have adopted the 2000 version of the building energy code. Two additional communities, Monticello and Webster City, are now participating in a DNR demonstration program to adopt and enforce the higher building energy standards. Through the program, Monticello and Webster City will create customized enforcement and educational efforts, based on their local situations.

These communities stand as models to other Iowa towns for improving their local economies and environment through building standards.

For more information about Iowa's building energy codes, contact Michael Adams at (515) 281-4262; e-mail: [Michael.Adams@dnr.state.ia.us](mailto:Michael.Adams@dnr.state.ia.us)

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# Calendar of Events

April 24. Sioux City, Iowa and June 12, Cedar Rapids, Iowa. *Community Forum to Save Energy*. Presented by the DNR's Iowa Energy Bank. Iowa communities can learn how to improve their buildings, save money and create economic development opportunities through energy efficiency. For information, go to: [www.state.ia.us/dnr/energy/events](http://www.state.ia.us/dnr/energy/events), or contact Chad Stobbe at (515) 242-5851; e-mail: [Chad.Stobbe@dnr.state.ia.us](mailto:Chad.Stobbe@dnr.state.ia.us)

June 2-5. Portland, Oregon. *WindPower 2002*. The largest wind energy conference in North America, sponsored by the American Wind Energy Association. Go to: [www.awea.org/conference](http://www.awea.org/conference)

June 15 & 16. Mason City, Iowa. *Solar Heating and Domestic Hot Water Workshop*. Sponsored by the Iowa Renewable Energy Association. For details, contact IRENEW at (563) 288-2552; e-mail: [irenew@irenew.org](mailto:irenew@irenew.org)

July 15 & 16. Des Moines, Iowa. *2002 National Building Energy Code Conference*. Coordinated by the Iowa DNR and sponsored by the Pacific Northwest National Laboratory. Building energy code officials from across the nation will meet to discuss programs, policies and new developments in the industry. Go to: [www.state.ia.us/dnr/energy/events](http://www.state.ia.us/dnr/energy/events) for details, or contact Craig Stark at (515) 281-4739; e-mail: [Craig.Stark@dnr.state.ia.us](mailto:Craig.Stark@dnr.state.ia.us)

July 17. Omaha, Nebraska. *Governors' Ethanol Coalition* meeting. Governors and representatives from 27 states will convene to discuss market and production opportunities for ethanol. For information, contact Gerri Monahan at (402) 471-2941; e-mail: [gmonahan@nrcdec.nrc.state.ne.us](mailto:gmonahan@nrcdec.nrc.state.ne.us)

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